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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,967	12/09/2003	Masahiko Ogawa	CFA00022US	6424
34904 7590 08/22/2007 CANON U.S.A. INC. INTELLECTUAL PROPERTY DIVISION 15975 ALTON PARKWAY IRVINE, CA 92618-3731			EXAMINER PRAKASAM, RAMYA G	
			ART UNIT 3651	PAPER NUMBER
			MAIL DATE 08/22/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/731,967

Applicant(s)

OGAWA ET AL.

Examiner

Ramya G. Prakasam

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/7/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/7/2007 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 5-6, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashima (U.S. Patent No. 6,950,787).

Hashima discloses a method for simulating the behavior of a flexible medium which is conveyed along a conveying path constructed of a pair of conveyor rollers, the method comprising the steps of:

- Defining a contact region of the conveyor rollers where the pair of conveyor rollers contact each other and a non-contact region of the conveyor rollers where the pair of

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- conveyor rollers do not contact each other (See Figure 11 – portion of the rollers are either contact regions or non-contact regions);
- Setting a first peripheral speed and a second peripheral speed for the contact region and the non-contact region, respectively, the first and the second peripheral speeds being different from each other (See Column 22, lines 32-41 – difference in the speed of the rollers will create a difference between the conveying speed of the flexible medium between the contact region and the non-contact region);
 - Performing a simulation such that a conveying force corresponding to the difference between the second peripheral speed and a speed of the flexible medium is applied to the flexible medium when the flexible medium reaches the non-contact region of the conveyor rollers, such that the flexible medium is conveyed at the first peripheral speed when the flexible medium reaches the contact region of the conveyor rollers (See Column 14, lines 39-46).
 - Wherein the pair of conveyor rollers consists of a drive roller and a driven roller and the second peripheral speed is set individually for each of the drive roller and the driven roller (See Figures 9A and 9B).

Hashima further discloses an apparatus which simulates the behavior of a flexible medium which is conveyed along a conveying path constructed of a pair of conveyor rollers, the apparatus comprising:

- A memory which stores a first peripheral speed and a second peripheral speed, the first peripheral speed and the second peripheral speed being different from each other and being set respectively for a contact region of the conveyor rollers where the

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conveyor rollers contact each other and being set respectively for a contact region of the conveyor rollers where the conveyor rollers contact each other and a non-contact region of the conveyor rollers where the conveyor rollers do not contact each other (See Column 22, lines 32-41 – difference in the speed of the rollers will create a different between the conveying speed of the flexible medium between the contact region and the non-contact region); and

- A processor which performs a simulation under a condition that a conveying force corresponding to the difference between the second peripheral speed and a moving speed of the flexible medium is applied to the flexible medium when the flexible medium reaches the non-contact region of the conveyor rollers and a condition that the flexible medium is conveyed at the first peripheral speed when the flexible medium reaches the contact region of the conveyor rollers (See Column 14, lines 39-46).
- Wherein the pair of conveyor rollers consists of a drive roller and a driven roller and the memory stores the second peripheral speed for each of the drive roller and the driven roller individually (See Figures 9A and 9B).

Hashima further discloses a storage medium which stores a program for executing a method for simulating the behavior of a flexible medium which is conveyed along a conveying path constructed of a pair of conveyor rollers, the program comprising the steps of:

- Defining a contact region of the conveyor rollers where the pair of conveyor rollers contact each other, and a non-contact region of the conveyor rollers where the pair of

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- conveyor rollers do not contact each other (See Figure 11 – portion of the rollers are either contact regions or non-contact regions); and
- Setting a first peripheral speed and a second peripheral speed for the contact region and the non-contact region, respectively, the first and second peripheral speeds being different from each other (See Column 22, lines 32-41 – difference in the speed of the rollers will create a difference between the conveying speed of the flexible medium between the contact region and the non-contact region);
 - Performing a simulation under a condition that a conveying force corresponding to the difference between the second peripheral speed and a moving speed of the flexible medium is applied to the flexible medium when the flexible medium reaches the non-contact region of the conveyor rollers and a condition that the flexible medium is conveyed at the first peripheral speed when the flexible medium reaches the contact region of the conveyor rollers (See Column 14, lines 39-46).

Claim Rejections - 35 USC § 103

5. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashima in view of May (U.S. Patent No. 6,549,745).

Hashima discloses all claim limitations, except for:

- A method, program and storage medium wherein the distance between the axes of the conveyor rollers is calculated on the basis of a nip width which is set in advance.
- An apparatus comprising wherein the processor calculates the distance between the axes of the conveyor rollers on the basis of a nip width which is set in advance.

May discloses:

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- A method, program and storage medium wherein the distance between the axes of the conveyor rollers is calculated on the basis of a nip width which is set in advance (See Column 10, lines 49-55) for the purpose of increasing or decreasing engagement with the nip (See Column 10, lines 54-55).
- An apparatus comprising wherein the processor calculates the distance between the axes of the conveyor rollers on the basis of a nip width which is set in advance (See Column 10, lines 49-55) for the purpose of increasing or decreasing engagement with the nip (See Column 10, lines 54-55).

It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify Hashima by utilizing:

- A method, program and storage medium wherein the distance between the axes of the conveyor rollers is calculated on the basis of a nip width which is set in advance for the purpose of increasing or decreasing engagement with the nip.
- An apparatus comprising wherein the processor calculates the distance between the axes of the conveyor rollers on the basis of a nip width which is set in advance for the purpose of increasing or decreasing engagement with the nip.

6. Claims 4, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashima in view of Iijima (U.S. Patent Application Publication No. 2002/0176722).

Hashima discloses all claimed limitations (see above), except for:

- A method further comprising the steps of:

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- Calculating a load torque applied to the conveyor rollers on the basis of a contact force generated when the flexible medium is in contact with a conveyor guide for conveying the flexible medium; and
 - Issuing a warning when the calculated load torque is greater than a driving torque of the conveyor rollers, the driving torque being set in advance.
- An apparatus, wherein the processor calculates a load torque applied to the conveyor rollers on the basis of a contact force generated when the flexible medium is in contact with a conveyor guide for conveying the flexible medium and issues a warning when the calculated load torque is greater than a driving torque of the conveyor rollers, the driving torque being set in advance.

Iijima discloses:

- A method further comprising the steps of:
- Calculating a load torque applied to the conveyor rollers on the basis of a contact force generated when the flexible medium is in contact with a conveyor guide for conveying the flexible medium (See Paragraph 0026) for the purpose of improving the limit value of the load torque (See Paragraph 0026); and
 - Issuing a warning when the calculated load torque is greater than a driving torque of the conveyor rollers, the driving torque being set in advance (See Paragraph 0024) for the purpose of accommodating the increase in the normal slip in the conveyor (See Paragraph 0024).

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- An apparatus, wherein the processor calculates a load torque applied to the conveyor rollers on the basis of a contact force generated when the flexible medium is in contact with a conveyor guide for conveying the flexible medium (See Paragraph 0026) and issues a warning when the calculated load torque is greater than a driving torque of the conveyor rollers, the driving torque being set in advance (See Paragraph 0024) for the purpose of improving the limit value of the load torque and accommodating the increase in the normal slip of the conveyor. (See Paragraphs 0024 and 0026).

It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify Hashima by utilizing:

- A method further comprising the steps of:
 - Calculating a load torque applied to the conveyor rollers on the basis of a contact force generated when the flexible medium is in contact with a conveyor guide for conveying the flexible medium for the purpose of improving the limit value of the load torque; and
 - Issuing a warning when the calculated load torque is greater than a driving torque of the conveyor rollers, the driving torque being set in advance for the purpose of accommodating the increase in the normal slip in the conveyor.
- An apparatus, wherein the processor calculates a load torque applied to the conveyor rollers on the basis of a contact force generated when the flexible medium is in contact with a conveyor guide for conveying the flexible medium and issues a warning when the calculated load torque is greater than a driving torque of the

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conveyor rollers, the driving torque being set in advance for the purpose of improving the limit value of the load torque and accommodating the increase in the normal slip of the conveyor.

Response to Arguments

Applicant's arguments with respect to claims 1-8 and 10-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramya G. Prakasam whose telephone number is (571) 272-6011. The examiner can normally be reached on Monday - Thursday, 8:30am-7pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

8/20/2007

RGP



GENE O. CRAWFORD
SUPERVISORY PATENT EXAMINER